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is called Cabulla blanca, or white Cabulla, which Mr. Thomson describes as growing only in the hottest climates, and producing fibres nine feet long. The specimens of the article are: 1. twine or thread, called pita; 2. two ropes; 3. a purse; 4. a man's shoe and a child's. It is evident that this is the same substance as Dr. Hamilton's pita; and Mr. Thomson recommends that comparative trials of the tenacity of this fibre with hemp should be made, in order to ascertain if "an article so important to our navy and to our commerce might not in future be got from South America, instead of from the north of Europe.

No. IV.

INSECT INJURIOUS TO THE SUGAR-CANE.

The Thanks of the Society were voted to C. J. JOHNSTONE, Esq. late of the Island of Grenada, and now residing in Great Ormond Street, for his Account of an Insect that destroys the Sugar-cane in the Island of Grenada.

In the 46th Volume of the Society's Transactions is a paper by the late Rev. Lansdowne Guilding on a large coleopterous insect, the *Calandra palmarum,* and on two or three other insects which in their grub state do more or less damage to the sugar-cane in the islands of the West Indies.

In the year 1831 a hurricane occurred in the island of Grenada, soon after which an insect new to that colony, or at least hitherto unobserved, was found on the canes on the windward side of the island. Since that time it has been progressively multiplying and extending its ravages, so that in some instances the estates have lost nearly half their crop of sugar, and in most a third has been destroyed.

This insect is described scientifically in the 35th Number of Mr. Loudon's Magazine of Natural History, by J. O. Westwood, Esq. F.L.S., who has given it the name of *Delphax saccharivora,* a genus belonging to the family of *Cicadidæ.* Like all others of this family it possesses the power of leaping; and Mr. Westwood is of opinion that it may be the same with the Jumper-fly mentioned by Mr. Guilding.

The eggs of this insect are deposited, according to Mr. Johnstone, in the midrib of the cane-leaf, the female making oblique incisions in parallel rows just through the cuticle, and depositing an egg in each incision; the aperture being masked or closed by a minute flock of cottony matter. The insect as it issues from the egg, and in every succeeding state, is furnished with a jointed sucker, which it thrusts into the leaves and stem of the cane, in order to extract the juices of the plant, on which it subsists. The surface of the leaf on which they are found soon becomes covered with a blackish substance, like honey dew (being produced, probably, either from extravasation of the juices of the plant, or by the excrements of the insect, as is the case with Aphides), which also contributes to weaken the plant, by clogging up its exhalant pores.

The young succulent canes, as they shoot from the ground, are particularly infested with this insect; and whole fields of ratoons, that used to furnish from eight to ten successive crops, have been entirely cut off in the second year.

Various methods have been tried to get rid of this grievous pest, by the application of lime and of sulphur, and by fumigating with tobacco, but without any sensibly advantageous result. Pulling off the affected leaves, where this could be done without injury to the plant, and collecting them in heaps and burning them, has also been resorted to, but in vain.

The only thing that has hitherto been of any real service has been the adoption of a contrivance similar to that which is sometimes had recourse to here for thinning the multitudes of the Turnip-fly. To J. Stokes, Esq., President of the Agricultural Society of Grenada, the colony is indebted for the introduction of the contrivance, and for those modifications in its form that render it easy of application to plantations of canes. The machine consists of a light pair of wheels, supporting a flat open frame, over which is nailed a piece of coarse cloth, covered on its under surface with tar: the frame is prolonged forward into two light shafts, and just in advance of the cloth is a light brush. The wheels are wide enough apart to include two rows of canes, and the animal that draws the machine walks between the two rows. The brush rustles lightly over the plants, and in so doing scares the insects, which immediately jump up, and striking against the tarred cloth, remain stuck upon it like flies on birdlime. By the time that the machine has made one turn the cloth will generally be covered with insects, when the application of a brush charged with tar will renew the surface. It is obvious, however, that this contrivance is applicable only when the canes are very young and low; and although in this stage of their growth they are peculiarly exposed to the attacks of the insect, yet some method is still wanting to relieve them in more advanced states from this terrible enemy.